

Chapter 8: Transportation

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8.1 Introduction

This chapter discusses the existing travel patterns in the Mountain View Corridor (MVC) transportation impact analysis area. Travel patterns were analyzed primarily for automobiles and transit. Section 1.6.4, Transit Network, in Chapter 1 provides additional information about how transit is used in the MVC study area. Information about bicycle and pedestrian accessibility can be found in Chapter 11, Considerations Relating to Pedestrians and Bicyclists.

Transportation Impact Analysis Area. The transportation impact analysis area is the same as the MVC study area described in Section 1.1, Study Area Description. This area is bounded on the west by the Oquirrh Mountains, on the east by Bangerter Highway, and on the north by Interstate 80 (I-80) in Salt Lake County; the area is bounded on the south by Utah Lake, on the west by the Eagle Mountain City limits, and on the east by Interstate 15 (I-15) in Utah County. The analysis focused primarily on major roads such as arterials and freeways at proposed MVC interchanges that could be affected by increased traffic from the project.

8.2 Regulatory Setting

Technical Advisory T6640.8A, Guidance on Preparing and Processing Environmental and Section 4(f) Documents, from the Federal Highway Administration (FHWA) requires an analysis of travel patterns and accessibility in an Environmental Impact Statement (EIS).

8.3 Affected Environment

8.3.1 Resource Identification Methods

Data on travel patterns were obtained from several sources. The primary source was data obtained from the regional travel demand forecasting model from the Wasatch Front Regional Council (WFRC) and the Mountainland Association of Governments (MAG). Version 6.0 of the model was used to develop travel demand forecasts for 2005 and 2030 for both the non-tolled and tolled alternatives. Accident data for the transportation impact analysis area were collected from the Utah Department of Transportation (UDOT) and West Valley City (West Valley City 2003). Existing transit ridership information was obtained from the Utah Transit Authority (UTA).

The road segments evaluated in this EIS were selected because they could be affected by the proposed alternatives either by a direct connection to an interchange or by changes in travel patterns from redistribution of traffic in the transportation impact analysis area. Only freeways and arterials are evaluated in the regional travel demand model, and so only freeways and arterials are considered in this analysis. For additional information on the travel demand model used for and the traffic analysis conducted for this project, see Technical Report 05, Overall Travel Demand Modeling Methodology (MVC Management Team 2007).

8.3.2 Salt Lake County

8.3.2.1 Roadway Systems

Existing travel patterns and accessibility have been greatly affected by the population and employment growth in the cities in the transportation impact analysis area. The existing transportation system includes two major east-west freeways: I-80 on the northern edge of the transportation impact analysis area and 2100 South (State Route 201, or SR 201) from 7200 West to I-15. SR 201 and I-80 serve the area from Salt Lake City to West Valley City and Magna. The major east-west arterials are 3500 South (SR 171), 4100 South, 4700 South, and

5400 South (SR 173), which serve West Valley City; 7800 South (SR 209), New Bingham Highway, and Old Bingham Highway, which serve West Jordan; 12600 South, which serves Riverton and Herriman; and 14600 South (SR 140), which serves Bluffdale and which accesses I-15.

In the northern part of the transportation impact analysis area, Bangerter Highway and SR 111 are the major north-south arterials. Within the transportation impact analysis area, Bangerter Highway serves as the east transportation route boundary and SR 111 serves as the west transportation route boundary. Other major north-south arterials are 5600 West and 7200 West. Redwood Road serves as a north-south connector in the southern part of the transportation impact analysis area.

The transportation facilities in western Salt Lake County south of SR 201 consist primarily of arterial streets that are not intended to accommodate long-distance through trips. The existing east-west and north-south arterial streets have numerous driveways (commercial and residential), and travel is hindered by the lack of a more continuous high-capacity, limited-access roadway system. In addition, some of the arterials do not provide complete access from west to east. This has led to congestion, unacceptable levels of service, and higher-than-average accident rates. These factors affect travel in the transportation impact analysis area.

Congestion Levels on Key Road Segments

The key road segments evaluated for Salt Lake County in this EIS along with congestion levels are shown in [Table 8.3-1](#) on page 8-5. The table provides 2005 information from the WFRC regional travel model for daily volume and volume-to-capacity (V/C) ratios for the peak direction in the afternoon (PM) peak period, which is from 3:00 PM to 6:00 PM.

The existing V/C ratios are a measurement of the traffic congestion levels. A V/C ratio greater than 1.0 represents severe congestion because the volume of traffic exceeds the capacity of the road. All V/C ratios greater than 1.0 represent the same level of roadway traffic failure (that is, severe congestion); however, this chapter shows individual V/C ratios greater than 1.0 in order to show the magnitude of the severe congestion on a facility. A V/C ratio between 0.75 and 0.99 represents heavy congestion, and a V/C ratio between 0.5 and 0.74 represents moderate congestion. A V/C ratio of less than 0.5 indicates minor to no congestion.



The V/C ratios for the Salt Lake County portion of the transportation impact analysis area during the PM peak traffic period currently range from 0.16 to 1.04. This means that there is a wide range of congestion levels from no congestion to severe congestion.

Delay and Level of Service at Key Intersections

In the transportation impact analysis area, key intersections with traffic signals were analyzed to determine how well they were functioning. The intersections evaluated in this EIS are shown in [Table 8.3-2](#) on page 8-7.

Delay (the amount of time spent waiting at the intersection), measured in seconds per vehicle, and associated level of service (LOS) were used to quantify how the intersections were functioning. Levels of service, which range from A to F, are a measure of traffic operating conditions and how those conditions are perceived by drivers. LOS A represents a situation in which traffic travels at or near the speed limit and vehicles are able to maneuver easily. LOS F represents a situation in which traffic is heavily congested (stop-and-go traffic) and vehicles are not able to maneuver easily. (For more information, see Section 1.6.3.1, Level of Service.)

The operating conditions of the intersections range from little delay (8.0 seconds) and LOS A to considerable delay (71.5 seconds) and LOS E. LOS E is considered poor operating conditions.

8.3.2.2 Transit Systems

Transit service in the transportation impact analysis area in Salt Lake County is provided by UTA. Twenty-three bus routes serve the transportation impact analysis area as shown in [Table 8.3-3](#) on page 8-8. Most of the bus routes in Salt Lake County provide service in an east-west direction in the transportation impact analysis area and then connect with a TRAX station or continue to downtown Salt Lake City outside the transportation impact analysis area.



**Table 8.3-1. Existing Congestion Levels for Key Road Segments
in Salt Lake County (PM Peak Traffic Period)**

Segment ^a	Existing (2005) Volume (Daily)	Existing (2005) V/C Ratio ^b (PM Peak Period)
<i>Freeways</i>		
I-15, (SB) SR 201 to I-215	103,000	0.85
I-15, (NB) SR 201 to I-215	101,000	0.68
I-15, (SB) I-215 to Bangerter Highway	94,000	0.88
I-15, (NB) I-215 to Bangerter Highway	94,000	0.71
I-15, (SB) Bangerter Highway to Point of the Mountain	72,000	0.78
I-15, (NB) Bangerter Highway to Point of the Mountain	72,000	0.74
I-80, (WB) 7200 West to Bangerter Highway	11,000	0.25
I-80, (EB) 7200 West to Bangerter Highway	11,000	0.16
I-80, (WB) Bangerter Highway to I-215	24,000	0.35
I-80, (EB) Bangerter Highway to I-215	32,000	0.51
I-80, (WB) I-215 to I-15	35,000	0.52
I-80, (EB) I-215 to I-15	33,000	0.47
SR 201, (WB) SR 111 to Bangerter Highway	28,000	0.72
SR 201, (EB) SR 111 to Bangerter Highway	29,000	0.51
SR 201, (WB) Bangerter Highway to I-15	45,000	0.90
SR 201, (EB) Bangerter Highway to I-15	45,000	0.79
<i>North-South Principal Arterials</i>		
SR 111, SR 201 to 3500 South	5,000	0.53
SR 111, 3500 South to 6200 South	9,600	0.36
SR 111, 6200 South to New Bingham Highway	5,800	0.43
7200 West, I-80 to SR 201	Does not exist ^d	Does not exist ^d
7200 West, SR 201 to 4100 South	15,000	0.91
5600 West, I-80 to SR 201 ^c	4,900	0.56
5600 West, SR 201 to 3500 South	17,000	0.79
5600 West, 3500 South to 6200 South ^c	12,000	0.81
5600 West, 6200 South to 9000 South ^c	7,200	0.88
<i>East-West Principal Arterials</i>		
California Avenue, 7200 West to Bangerter Highway	9,400	0.65
2700 South, SR 111 to 5600 West	3,600	0.44
2700 South, 5600 West to Bangerter Highway	13,000	0.58
3500 South, 8400 West to 5600 West ^c	15,000	0.77
3500 South, 5600 West to Bangerter Highway ^c	33,000	0.88
4100 South, SR 111 to 5600 West	9,800	0.71
4100 South, 5600 West to Bangerter Highway	28,000	0.88
5400 South, SR 111 to Bangerter Highway	19,000	0.88
6200 South, SR 111 to Bangerter Highway ^c	25,000	0.97
7800 South, SR 111 to Bangerter Highway	13,000	0.98

▲ ▲

Segment ^a	Existing (2005) Volume (Daily)	Existing (2005) V/C Ratio ^b (PM Peak Period)
9000 South, SR 111 to Bangerter Highway ^c	19,000	1.01
11400 South/11800 South, SR 111 to Bangerter Highway	3,400	0.41
12600 South, 5600 West to Bangerter Highway	18,000	0.80
13400 South, 5600 West to Bangerter Highway	11,000	1.04

^a NB = northbound; SB = southbound; EB = eastbound; WB = westbound.

^b V/C ratios: Less than 0.5 = minor to no congestion; 0.5 to 0.74 = moderate congestion; 0.75 to 0.99 = heavy congestion; 1.0 or higher = severe congestion, stop-and-go traffic.

^c Segment is listed in the WFRC Long-Range Transportation Plan for future improvements.

^d The roadway does not currently exist but should be in place before the end of the 2030 planning period. The roadway was included in this table to provide consistency between the affected environment and environmental consequences sections of this chapter (Section 8.3 and Section 8.4).

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**Table 8.3-2. Existing Intersection Delay and Level of Service
in Salt Lake County**

Intersection	Existing Intersection Conditions (PM Peak Period)	
	Delay (seconds)	LOS
SR 111 & 3500 South	19.2	B
SR 111 & 5400 South	33.4 ^a	D
SR 111 & 6200 South	Does not exist ^b	Does not exist ^b
7200 West & 3500 South	13.5	B
5600 West & California Avenue	39.5	D
5600 West & SR 201 WB ramps	30.7	C
5600 West & SR 201 EB ramps	8.0	A
5600 West & 3500 South	38.0	D
5600 West & 4100 South	25.4	C
5600 West & 5400 South	36.4	D
5600 West & 6200 South	18.3	B
5600 West & 7800 South	Does not exist ^b	Does not exist ^b
5600 West & 9000 South	Does not exist ^b	Does not exist ^b
Bangerter Highway & SR 201 WB ramps	56.3	E
Bangerter Highway & SR 201 EB ramps	28.4	C
Bangerter Highway & 3500 South	71.5	E
Bangerter Highway & 5400 South	44.4	D
Bangerter Highway & 6200 South	34.9	C
Bangerter Highway & 9000 South	37.6	D
Bangerter Highway & 10400 South	16.1	B
Bangerter Highway & 12600 South	27.4	C
Bangerter Highway & 13400 South	26.4	C

^a The unsignalized intersection delay is for the roadway entering the intersection that has the highest delay.

^b The roadway does not currently exist but should be in place before the end of the 2030 planning period. The roadway was included in this table to provide consistency between the affected environment and environmental consequences sections of this chapter (Section 8.3 and Section 8.4).

**Table 8.3-3. Existing Bus Routes in the Salt Lake County Portion of the Impact Analysis Area**

Route		Serves	Route Length ^a (One-Way Travel Time)	Peak Period Headway ^b
35	3500 South	Magna – Mill Creek TRAX Station	62	15 minutes
41	4100 South	5600 West –3900 South TRAX Station	35 minutes	25 minutes
47	4700 South	5600 West – 4500 South TRAX Station	37 minutes	15 minutes
54	5400 South	5600 West – 5300 South TRAX Station	32 minutes	30 minutes
62	6200 South	5600 West – 6300 South TRAX Station	38 minutes	30 minutes
78	7800 South	4800 West – 7800 South TRAX Station	26 minutes	30 minutes
90	9000 South	4800 West-9000 South TRAX Station	22 minutes	30 minutes
232	3200 West	9000 South-Downtown Salt Lake City	67 minutes	30 minutes
236	3600 West/Airport	Valley Fair-Airport	27 minutes	30 minutes
240	4000 West/Dixie Drive	Jordan Landing-Downtown Salt Lake City	59 minutes	30 minutes
248	4800 West	4715 South-1300 South TRAX	46 minutes	30 minutes
327	West Jordan Fast Bus	Day Break-Downtown Salt Lake City	62 minutes	20 minutes
335	Magna Fast Bus	Magna-Downtown Salt Lake City	66 minutes	30 minutes
347	Riverton/Herriman Fast Bus	Herriman-Downtown Salt Lake City	63 minutes	20 minutes
348	Kearns Fast Bus	9000 South-Downtown Salt Lake City	70 minutes	30 minutes
356	West Valley Fast Bus	7000 South-Downtown Salt Lake City	45 minutes	30 minutes
451	Tooele Express	Tooele-Downtown Salt Lake Cit	30 minutes	30 minutes
475	Tooele Army Depot	Tooele-West Valley City	69 minutes	No peak service
453	Salt Lake Via Airport	Grantsville-Downtown Salt Lake City	74 minutes	30 minutes
454	Grantsville/Salt Lake	Herriman – Riverton – Downtown Salt Lake City	60 minutes	No peak service
518	Riverton	Riverton-10000 South TRAX Station	20 minutes	75 Minutes
550	Airport	Airport-Intermodal Center	24 minutes	30 minutes
551	International Center	Clockwise	26 minutes	30 minutes

^a Includes travel time outside the transportation impact analysis area.

^b Headway refers to the amount of time between buses on a given route. For a route with a 30-minute headway, a bus arrives at each stop every 30 minutes.

Source: UTA 2007



8.3.3 Utah County

8.3.3.1 Roadway Systems

Travel in northwestern Utah County has been greatly affected by population growth in existing cities such as Lehi as well as the creation of new cities such as Saratoga Springs and Eagle Mountain. In northwestern Utah County, the main travel patterns are east-west as a result two factors. First, there are growing residential areas along the west side of northern Utah County, and the main employment and destination centers in Utah County are located along the east side of the county in the Orem-Provo area. Second, the majority of motorists who want to travel north or south on I-15 (for example, to access employment and destination areas in Salt Lake County) use east-west arterials to access the freeway.

Redwood Road (SR 68) and I-15 are the primary north-south roadways in northern Utah County. Central Street and 2300 West also provide north-south connections in the area. 11600 South provides a limited north-south connection on the western side of Lehi.

The major east-west connector in Utah County is Main Street (8570 North, or SR 73) in Lehi. Some east-west connections can also be made using 2100 North, 1500 North, and 7350 North/1900 South, but these routes are not continuous.

Congestion Levels on Key Road Segments

As with Salt Lake County, the transportation facilities in northern Utah County, excluding I-15 and Redwood Road, are not intended to accommodate a high volume of long-distance through trips, freight movements, or commuting trips to and from business centers, which affects the overall travel patterns and accessibility. Key road segments were reviewed to determine existing and future levels of congestion. These segments were selected because they could be affected by the proposed alternatives either by a direct connection to an interchange or by changes in travel patterns from redistribution of traffic in the transportation impact analysis area.

[Table 8.3-4](#) on page 8-11 shows the 2005 congestion levels according to the MAG regional travel demand model. The V/C ratios for the Utah County portion of the transportation impact analysis area during the PM peak traffic period currently range from 0.20 to 0.98. This means that there is a wide range of congestion levels ranging from no congestion to heavy congestion. The highest levels of congestion are along I-15, Redwood Road, and SR 73.

Delay and Level of Service at Key Intersections

Key intersections were analyzed to determine how well they were functioning in terms of delay and level of service. The intersections evaluated in this EIS are shown in [Table 8.3-5](#) on page 8-12. The operating conditions of the intersections range from little delay (10.6 seconds) and LOS B to considerable delay (greater than 180 seconds) and LOS F. LOS F is considered unacceptable operating conditions.

8.3.3.2 Transit Systems

Eleven UTA routes serve the Utah County part of the transportation impact analysis area as shown in [Table 8.3-6](#) on page 8-12. Most of these routes serve areas along the I-15 corridor.

Table 8.3-4. Existing Congestion Levels for Key Road Segments in Utah County (PM Peak Traffic Period)

Segment ^a	Existing (2005) Volume (Daily)	Existing (2005) V/C Ratio ^b (PM Peak Period)
<i>Freeways</i>		
I-15, (SB) Point of the Mountain to Lehi 1200 W.	67,000	0.95
I-15, (NB) Point of the Mountain to Lehi 1200 W.	68,000	0.85
I-15, (SB) Lehi 1200 W. to Pleasant Grove	58,000	0.81
I-15, (NB) Lehi 1200 W. to Pleasant Grove	59,000	0.80
I-15, (SB) Pleasant Grove to University Parkway	61,000	0.80
I-15, (NB) Pleasant Grove to University Parkway	62,000	0.84
<i>North-South Principal Arterials</i>		
Redwood Road, Bangerter Highway to SR 73	15,000	0.86
2300 West (Lehi), 2100 North to SR 73	Does not exist ^c	Does not exist ^c
2300 West (Lehi), SR 73 to 1900 South	2,700	0.20
<i>East-West Principal Arterials</i>		
Bangerter Highway, 13400 S. to I-15	29,000	0.61
Porter Rockwell, MVC to I-15	Does not exist ^c	Does not exist ^c
2100 North, MVC to I-15	Does not exist ^c	Does not exist ^c
Lehi Main Street (SR 73), MVC to I-15	25,000	0.98
1000 South, SR 73 to I-15	Does not exist ^c	Does not exist ^c
1900 South, Redwood Road to I-15	Does not exist ^c	Does not exist ^c
^a NB = northbound; SB = southbound; EB = eastbound; WB = westbound. ^b V/C ratios: Less than 0.5 = minor to no congestion; 0.5 to 0.74 = moderate congestion; 0.75 to 0.99 = heavy congestion; 1.0 or higher = severe congestion, stop-and-go traffic. ^c The roadway does not currently exist but should be in place before the end of the 2030 planning period. The roadway was included in this table to provide consistency between the affected environment and environmental consequences sections of this chapter (Section 8.3 and Section 8.4).		

**Table 8.3-5. Existing Intersection Delay and Level of Service in Utah County**

Intersection	Existing Intersection Conditions (PM Peak Period)	
	Delay (seconds)	LOS
Redwood Road & SR 73	18.8	B
2300 West (Lehi) & SR 73	>180 ^a	F
Center Street (Lehi) & SR 73	16.5	B
Pleasant Grove & I-15 SB ramps	35.5	D
Pleasant Grove & I-15 NB ramps	10.6 ^a	B

^a The unsignalized intersection delay is for the roadway entering the intersection that has the highest delay.

Table 8.3-6. Existing Bus Routes in the Utah County Portion of the Impact Analysis Area

Route	Serves	Route Length ^a (one-way travel time)	Peak Period Headway ^b
801 Salt Lake City/Orem/Provo Express	Provo – Salt Lake City	97 minutes	30 minutes
802 Salt Lake City/Utah County Express	Provo – Salt Lake City	103 minutes	70 minutes
803 North Utah County/Salt Lake City Express	Orem – Salt Lake City	91 minutes	30 minutes
804 Salt Lake City/Lindon Express	Orem – Lindon – Pleasant Grove – Salt Lake City	93 minutes	60 minutes
805 South Utah County/Salt Lake City Express	Payson – Downtown Salt Lake City	91 minutes	60 minutes
807 Pleasant Grove/Cedar Hills/Highland Express	Pleasant Grove – Downtown Salt Lake City	74 minutes	30 minutes
810 University of Utah/American Fork Express	Orem – American Fork – Lehi – Salt Lake	110 minutes	40 minutes
811 Utah Valley/TRAX Connector	Provo – Sandy Civic Center TRAX Station	78 minutes	30 minutes
816 Utah County Night Service	East Bay – Timpanogos Transit Center – Sandy Civic Center TRAX Station	80 minutes	No peak service
817 Provo/Orem TRAX Express	Provo-Sandy TRAX	56 minutes	No peak service
850 State Street (North) Shuttle	Lehi – Timpanogos Transit Center	75 minutes	30 minutes

^a Includes travel time outside the transportation impact analysis area.

^b Headway refers to the amount of time between buses on a given route. For a route with a 30-minute headway, a bus arrives at each stop every 30 minutes.

Source: UTA 2007



8.4 Environmental Consequences

This section analyzes how the proposed alternatives would affect freeways, principal arterials, and transit in the transportation impact analysis area (the impact would be felt by both motorists and bus transit users). Most impacts would occur in areas where an alternative connects to existing freeways and arterials at interchanges. At interchange locations, there could be increased traffic as motorists enter and exit the MVC. This chapter provides an overview of the roads that would have greater or less congestion after the MVC is built. Appropriate steps to address congestion that remains on the transportation network would be evaluated in future WFRC and MAG regional transportation plans.

This section does not specifically address construction-related transportation impacts (see Chapter 21, Construction Impacts). However, during construction, there would be increased congestion around the MVC construction sites. For the most part, the impacts would occur as the MVC is constructed at or near existing freeways and arterials such as SR 201 or 3500 South. The delays associated with construction would be temporary, and alternate routes to minimize effects on motorists would be identified with signs.

8.4.1 Methodology

Roadway and transit impacts were analyzed for the Salt Lake County and Utah County action alternatives and the No-Action Alternative. The No-Action Alternative includes all of the expected roadway improvements except the MVC according to the regional transportation plans for WFRC and MAG (MAG 2007; WFRC 2007).

Delay, level of service, and congestion based on V/C ratios were then calculated for key road segments, interchanges, and intersections to determine how each alternative would affect these roadway segments. The existing (2005) roadway conditions were compared to the No-Action Alternative to show the increase in travel congestion by 2030 if the MVC is not implemented. The changes in congestion on key road segments in 2030 as a result of the action alternatives were compared to the No-Action Alternative in 2030 to determine how the MVC would affect these segments. V/C ratios were used to compare the MVC action alternatives to the No-Action Alternative. Delay (in seconds) and level of service were used to analyze intersections that could be affected by the MVC.

The transportation impacts analysis has been updated since the Draft EIS to reflect Version 6.0 of the travel demand model and updated land-use forecasts for both the non-tolled and tolled alternatives. For more information, see Section 2.1.7.1, Revised Travel Demand Modeling for the Final EIS.

8.4.2 No-Action Alternative

8.4.2.1 Roadway Systems

Under the No-Action Alternative, the MVC would not be built, but the roadway improvements in the WFRC and MAG regional transportation plans would continue to be implemented. The projected traffic volumes under the No-Action Alternative reflect the projected roadway enhancements that would be made by 2030 to reduce congestion. Some of these key roadway improvements within the MVC transportation impact analysis area listed in the regional transportation plans include:

- Salt Lake County
 - Widen and construct a new alignment to four lanes on 5600 West.
 - Widen Redwood Road to four lanes.
 - Widen SR 111 to four lanes.
 - Widen 3500 South to four lanes.
 - Widen 4700 South widen to four/six lanes.
 - Widen and construct a new alignment to four lanes on 7800 South.
 - Widen Old Bingham Highway to four lanes.
 - Widen 9000 South to six lanes.
 - Widen and construct a new alignment to four lanes on 11400 South.
 - Widen and construct a new alignment to four lanes on 12600 South.
- Utah County
 - Widen I-15 to twelve lanes.
 - Widen Redwood Road to four lanes.
 - Widen SR 73 to four lanes.
 - Construct a new four-lane roadway on 1000 South.
 - Construct a new four-lane roadway on Pony Express Road.
 - Widen Geneva Road to four lanes.
 - Construct a new four-lane, north-south roadway west of I-15 in Orem, Vineyard, Lindon, and American Fork.

Congestion Levels on Key Road Segments

[Table 8.4-1](#) on page 8-16 shows the future congestion levels in terms of V/C ratios and summarizes the projected conditions for key road segments under the No-Action Alternative in 2030.

Several of the road segments are projected to experience severe congestion during the PM peak traffic period as indicated by the V/C ratios. As the V/C ratio increases, the road is considered to be more congested. The V/C ratios range

from 0.44 to 1.29 for Salt Lake County and from 0.52 to 1.20 for Utah County. This means that the congestion levels for most road segments in both Salt Lake County and Utah County are projected to increase under the No-Action Alternative through 2030. Shaded cells in [Table 8.4-1](#) indicate road segments where conditions would be more congested in 2030 than under existing conditions (2005). For those segments where the 2030 conditions are better than the existing conditions, it is likely that the WFRC and MAG regional plans include proposed improvements to those segments between 2005 and 2030.

Delay and Level of Service at Key Intersections

[Table 8.4-2](#) on page 8-18 shows how key intersections would operate under the No-Action Alternative in 2030. In the table, shaded cells indicate intersections where conditions would be worse in 2030 than under existing conditions. All of the existing intersections on Bangerter Highway and all but two of the existing intersections on 5600 West are expected to operate at an undesirable level of service and experience long delays. The No-Action conditions would be worse than the existing conditions in terms of increased delay and decreased level of service.

8.4.2.2 Transit Systems

The 2030 baseline transit system is the transit system that would be in place under the No-Action Alternative. This baseline transit system is based on the WFRC and MAG regional transportation plans, except for a fixed-guideway transit line (that is, light rail, trolley line, or commuter rail) in the Mountain View/5600 West corridor. The WFRC regional plan included a bus rapid transit line in this corridor. Bus rapid transit is a bus that provides express service using either a dedicated right-of-way, high-occupancy vehicle lane or ordinary streets but with less frequent bus stops. For the baseline transit system, a local bus route was included along 5600 West.

The 2030 baseline transit system under the No-Action Alternative is summarized in [Table 8.4-3](#) on page 8-19. The number of daily transit trips in the transportation impact analysis area would be 38,300. This is less than 1% of the total daily trips in the transportation impact analysis area.

**Table 8.4-1. Congestion Levels for Key Road Segments under Existing Conditions and the No-Action Alternative (PM Peak Traffic Period)**

Segment	V/C Ratio ^a (PM Peak Period)	
	Existing Conditions (2005)	No-Action Alternative (2030)
<u>Salt Lake County</u>		
<i>Freeways</i>		
I-15, (SB) SR 201 to I-215	0.85	1.00
I-15, (NB) SR 201 to I-215	0.68	0.81
I-15, (SB) I-215 to Bangerter Highway	0.88	1.09
I-15, (NB) I-215 to Bangerter Highway	0.71	0.87
I-15, (SB) Bangerter Highway to Point of the Mountain	0.78	1.03
I-15, (NB) Bangerter Highway to Point of the Mountain	0.74	0.82
I-80, (WB) 7200 West to Bangerter Highway	0.25	0.72
I-80, (EB) 7200 West to Bangerter Highway	0.16	0.44
I-80, (WB) Bangerter Highway to I-215	0.35	0.62
I-80, (EB) Bangerter Highway to I-215	0.51	0.86
I-80, (WB) I-215 to I-15	0.52	0.67
I-80, (EB) I-215 to I-15	0.47	0.76
SR 201, (WB) SR 111 to Bangerter Highway	0.72	0.84
SR 201, (EB) SR 111 to Bangerter Highway	0.51	0.64
SR 201, (WB) Bangerter Highway to I-15	0.90	0.89
SR 201, (EB) Bangerter Highway to I-15	0.79	0.87
<i>North-South Principal Arterials</i>		
SR 111, SR 201 to 3500 South	0.53	1.13
SR 111, 3500 South to 6200 South	0.36	1.27
SR 111, 6200 South to New Bingham Highway	0.43	1.26
7200 West, I-80 to SR 201	Does not exist ^b	0.70
7200 West, SR 201 to 4100 South	0.91	1.08
5600 West, I-80 to SR 201	0.56	0.71
5600 West, SR 201 to 3500 South	0.79	1.10
5600 West, 3500 South to 6200 South	0.81	1.29
5600 West, 6200 South to 9000 South	0.88	1.20
<i>East-West Principal Arterials</i>		
California Avenue, 7200 West to Bangerter Highway	0.65	0.62
2700 South, SR 111 to 5600 West	0.44	0.91
2700 South, 5600 West to Bangerter Highway	0.58	0.94
3500 South, 8400 West to 5600 West	0.77	0.80
3500 South, 5600 West to Bangerter Highway	0.88	0.97



Segment	V/C Ratio ^a (PM Peak Period)	
	Existing Conditions (2005)	No-Action Alternative (2030)
4100 South, SR 111 to 5600 West	0.71	0.74
4100 South, 5600 West to Bangerter Highway	0.88	1.03
5400 South, SR 111 to Bangerter Highway	0.88	0.92
6200 South, SR 111 to Bangerter Highway	0.97	1.01
7800 South, SR 111 to Bangerter Highway	0.98	0.93
9000 South, SR 111 to Bangerter Highway	1.01	1.01
11400 South/11800 South, SR 111 to Bangerter Highway	0.41	1.05
12600 South, 5600 West to Bangerter Highway	0.80	1.26
13400 South, 5600 West to Bangerter Highway	1.04	1.17

Utah County

Freeways

I-15, (SB) County Line to Lehi 1200 W.	0.95	0.92
I-15, (NB) County Line to Lehi 1200 W.	0.85	0.82
I-15 (SB) Lehi 1200 W. to Pleasant Grove	0.81	0.74
I-15 (NB) Lehi 1200 W. to Pleasant Grove	0.80	0.73
I-15, (SB) Pleasant Grove to University Parkway	0.80	0.75
I-15, (SB) Pleasant Grove to University Parkway	0.84	0.73

North-South Principal Arterials

Redwood Road, Bangerter Highway to SR 73	0.86	1.11
2300 West (Lehi), 2100 North to SR 73	Does not exist ^b	1.20
2300 West (Lehi), SR 73 to 1900 South	0.20	0.52

East-West Principal Arterials

Bangerter Highway, 13400 S. to I-15	0.61	0.81
Porter Rockwell, MVC to I-15	Does not exist ^b	Does not exist ^b
2100 North, MVC to I-15	Does not exist ^b	Does not exist ^b
Lehi Main Street (SR 73), MVC to I-15	0.98	1.08
1000 South, SR 73 to I-15	Does not exist ^b	1.14
1900 South, Redwood Road to I-15	Does not exist ^b	Does not exist ^b

^a V/C ratios: Less than 0.5 = minor to no congestion; 0.5 to 0.74 = moderate congestion; 0.75 to 0.99 = heavy congestion; 1.0 or higher = severe congestion, stop-and-go traffic.

^b The roadway does not currently exist but should be in place before the end of the 2030 planning period. The roadway was included in this table to provide consistency between the affected environment and environmental consequences sections of this chapter (Section 8.3 and Section 8.4).

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Table 8.4-2. Intersection Delay and Level of Service under Existing Conditions and the No-Action Alternative

Intersection	Intersection Conditions (PM Peak Period)			
	Existing Conditions (2005)		No-Action Alternative (2030)	
	Delay (seconds)	LOS	Delay (seconds)	LOS
<i>Salt Lake County</i>				
SR 111 & 3500 South	19.2	B	49.5	D
SR 111 & 5400 South	33.4 ^a	D	51.4	D
SR 111 & 6200 South	Does not exist ^b	Does not exist ^b	19.1	B
7200 West & 3500 South	13.5	B	86.6	F
5600 West & California Avenue	39.5	D	28.3	C
5600 West & SR 201 WB ramps	30.7	C	54.7	D
5600 West & SR 201 EB ramps	8.0	A	17.5	B
5600 West & 3500 South	38.0	D	92.3	F
5600 West & 4100 South	25.4	C	63.6	E
5600 West & 5400 South	36.4	D	122.2	F
5600 West & 6200 South	18.3	B	80.5	F
5600 West & 7800 South	Does not exist ^b	Does not exist ^b	37.3	D
5600 West & 9000 South	Does not exist ^b	Does not exist ^b	104.6	F
Bangerter Highway & SR 201 WB ramps	56.3	E	58.3	E
Bangerter Highway & SR 201 EB ramps	28.4	C	75.3	E
Bangerter Highway & 3500 South	71.5	E	163.0	F
Bangerter Highway & 5400 South	44.4	D	161.2	F
Bangerter Highway & 6200 South	34.9	C	114.5	F
Bangerter Highway & 9000 South	37.6	D	143.7	F
Bangerter Highway & 10400 South	16.1	B	121.9	F
Bangerter Highway & 12600 South	27.4	C	83.6	F
Bangerter Highway & 13400 South	26.4	C	67.7	E
<i>Utah County</i>				
Redwood Road & SR 73	18.8	B	94.7	F
2300 West (Lehi) & SR 73	>180 ^a	F	100.7	F
Center Street (Lehi) & SR 73	16.5	B	28.3	C
Pleasant Grove & I-15 SB ramps	35.5	D	36.5	D
Pleasant Grove & I-15 NB ramps	10.6 ^a	B	6.9	A
^a The unsignalized intersection delay is for the roadway entering the intersection that has the highest delay. ^b The roadway does not currently exist but should be in place before the end of the 2030 planning period. The roadway was included in this table to provide consistency between the affected environment and environmental consequences sections of this chapter (Section 8.3 and Section 8.4).				

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Table 8.4-3. 2030 Baseline Transit Routes under the No-Action Alternative

Route	Serves	Peak Period Headway	
<u>Salt Lake County</u>			
<i>Existing Transit Service</i>			
35	3500 South	Magna – Mill Creek TRAX Station	15 minutes
41	4100 South	5600 West – 3900 South TRAX Station	25 minutes
47	4700 South	5600 West – 4500 South TRAX Station	15 minutes
54	5400 South	5600 West – 5300 South TRAX Station	30 minutes
62	6200 South	5600 West – 6300 South TRAX Station	30 minutes
78	7800 South	4800 West – 7800 South TRAX Station	30 minutes
90	9000 South	4800 West – 9000 South TRAX Station	30 minutes
232	3200 West	9000 South – Downtown Salt Lake City	30 minutes
236	3600 West/Airport	Valley Fair Mall – SLC Int'l. Airport	30 minutes
240	4000 West/Dixie Drive	Jordan Landing – Downtown Salt Lake City	30 minutes
248	4800 West	4715 South – 1300 South TRAX	30 minutes
327	West Jordan Fast Bus	Daybreak – Downtown Salt Lake City	20 minutes
335	Magna Fast Bus	Magna – Downtown Salt Lake City	30 minutes
347	Riverton/Herriman Fast Bus	Herriman – Downtown Salt Lake City	20 minutes
348	Kearns Fast Bus	9000 South – Downtown Salt Lake City	30 minutes
356	West Valley Fast Bus	7000 South – Downtown Salt Lake City	30 minutes
451	Tooele Express	Tooele – Downtown Salt Lake City	30 minutes
475	Tooele Army Depot	Tooele – West Valley City	No peak service
453	Salt Lake via Airport	Grantsville – Downtown Salt Lake City	30 minutes
454	Grantsville/Salt Lake	Herriman – Riverton – Downtown Salt Lake City	No peak service
518	Riverton	Riverton – 10000 South TRAX Station	75 minutes
550	Airport	SLC Int'l. Airport – Intermodal Center	30 minutes
551	International Center	Clockwise	30 minutes
<i>New Transit Service by 2030</i>			
	California Avenue/1300 South	Magna – Ballpark TRAX Station – University of Utah	10 minutes
	SR 201 Express	Magna – Central Pointe TRAX Station	60 minutes
	6200 South	West Jordan – Fashion Place West TRAX Station	15 minutes
	3200 West	Riverton – Taylorsville	30 minutes
	Bangerter Highway	SLC Int'l. Airport – South Jordan	15 minutes
	5600 West	3500 South – Old Bingham Highway	30 minutes
	10600 South	Daybreak – Sandy Civic Center TRAX Station	30 minutes
	11800 South	Daybreak – Draper	15 minutes
	12600 South	Herriman – Draper	15 minutes
	West Valley Light-Rail Transit	Valley Fair Mall – 2100 South TRAX Station	15 minutes
	Mid Jordan Light-Rail Transit	Daybreak – Downtown Salt Lake City	15 minutes
	3500 South Bus Rapid Transit	Magna – West Valley City	15 minutes

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	Route	Serves	Peak Period Headway
<u>Utah County</u>			
<i>Existing Transit Service</i>			
801	Salt Lake City/Orem/Provo Express	Provo – Salt Lake City	30 minutes
802	Salt Lake City/Utah County Express	Provo – Salt Lake City	70 minutes
803	North Utah County/Salt Lake City Express	Orem – Salt Lake City	30 minutes
804	Salt Lake City / Lindon Express	Orem – Lindon – Pleasant Grove – Salt Lake City	60 minutes
805	South Utah County/Salt Lake City Express	Payson – Downtown Salt Lake City	60 minutes
807	Pleasant Grove/Cedar Hills/Highland Express	Pleasant Grove – Downtown Salt Lake City	30 minutes
810	University of Utah/American Fork Express	Orem – American Fork – Lehi – Salt Lake	40 minutes
811	Utah Valley/TRAX Connector	Provo – Sandy Civic Center TRAX Station	30 minutes
816	Utah County Night Service	East Bay – Timpanogos Transit Center – Sandy Civic Center TRAX Station	No peak service
817	Provo/Orem TRAX Express	Provo-Sandy TRAX	No peak service
850	State Street (North) Shuttle	Lehi – Timpanogos Transit Center	30 minutes
<i>New Transit Service by 2030</i>			
	Commuter Rail	Downtown Salt Lake City – Provo	20 minutes
	Eagle Mountain	Eagle Mountain – Lehi	30 minutes
	Redwood Road/SR 73	Bluffdale – American Fork	30 minutes
	Saratoga Springs	Saratoga Springs – Lehi	30 minutes
	State Street North	Lehi – Pleasant Grove	30 minutes

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8.4.3 Salt Lake County Alternatives

In Salt Lake County, two roadway alternatives and a transit alternative which would be implemented as part of the roadway alternatives are under consideration: the 5600 West Transit Alternative, the 5800 West Freeway Alternative, and the 7200 West Freeway Alternative. Under the 5600 West Transit Alternative, there is a dedicated right-of-way option and a mixed-traffic option. In addition, a tolling option was considered for each freeway alternative. Impacts under each combination of alternatives and options are discussed in the following sections.

8.4.3.1 5600 West Transit Alternative

As described in Chapter 2, Alternatives, two transit options are under consideration along 5600 West in Salt Lake County. One option, the Dedicated Right-of-Way Option, would incorporate a transit system running down the center of the roadway, and the other, the Mixed-Traffic Option, would incorporate a transit system running alongside the roadway. See Section 2.1.4.1, Transit Considerations, for more details on the proposed transit service. Both transit alignments would be about 24 miles long and would extend from Herriman to the Salt Lake City International Airport. Most of the transit alignment would be along 5600 West in Salt Lake County.

The two options differ in terms of whether the transit lane is separated from other traffic and in the number of transit stations along the transit line. The Dedicated Right-of-Way Option would have 17 stations and the Mixed-Traffic Alternative would have 25 stations.

5600 West Transit Alternative with Dedicated Right-of-Way Transit Option

Under this option, the center-running transit system would require the acquisition of additional right-of-way at station and park-and-ride lot locations and along the segments of the proposed transit line where 5600 West does not currently exist.

Under the No-Action Alternative, the number of daily transit trips in 2030 using bus and light rail, including trips with one or both ends within the transportation impact analysis area, would be 38,300 trips. Under the Dedicated Right-of-Way Transit Alternative, the number of daily transit trips would increase to 45,600 (a 19% increase).

Operation of transit along 5600 West would result in some reduced travel time and congestion as posted vehicle speeds are reduced from 45 mph (miles per hour) to 35 mph so that the roadway can accommodate more pedestrian traffic



related to the transit service. However, congestion would still be less than under the No-Action Alternative as shown above in [Table 8.4-1](#) on page 8-16.

5600 West Transit Alternative with Mixed-Traffic Transit Option

Under this option, the side-running transit system would require the acquisition of additional right-of-way at station and park-and-ride lot locations and along the segments of the proposed transit line where 5600 West does not currently exist.

Under the No-Action Alternative, the number of daily transit trips in 2030 using bus and light rail, including trips with one or both ends within the transportation impact analysis area, would be 38,300 trips. Under the Mixed-Traffic Option, the number of daily transit trips would increase to 40,400 trips (a 5% increase).

The impacts from operating transit under the Mixed-Transit Option would be the same as those from the Dedicated Right-of-Way Option except that there would be greater congestion under the Mixed-Transit Option. This greater congestion would occur because the transit vehicle would operate in traffic instead of in a separate lane as under the Dedicated Right-of-Way Transit Option. By having the fixed-guideway transit operating in traffic, there would also be a greater potential for accidents.

8.4.3.2 5800 West Freeway Alternative

As described in Chapter 2, Alternatives, this alternative would consist of a freeway extending from I-80 to the Utah County line. The 5800 West Freeway Alternative that was analyzed included the Dedicated Right-of-Way Option from the 5600 West Transit Alternative. The

5800 West Freeway Alternative Impacts	
Segments with greater congestion compared to the No-Action Alternative	12
Segments with less congestion compared to the No-Action Alternative	27
Intersections with greater delay compared to the No-Action Alternative	4
Intersections with less delay compared to the No-Action Alternative	18

combination of the 5800 West Freeway Alternative with either of the transit options would result in the same travel demand impacts, so the results of the analysis would have been the same if the Mixed-Traffic Option had been used.



Congestion Levels on Key Road Segments

[Table 8.4-4](#) on page 8-24 summarizes the projected V/C ratios for key road segments in Salt Lake County under the 5800 West Freeway Alternative.

As the volume of traffic approaches the capacity of the road, the amount of congestion increases and the travel time decreases. In [Table 8.4-4](#), the shaded cells indicate road segments where the congestion levels under an action alternative would be greater than those under the No-Action Alternative. Compared to the No-Action Alternative, the road segments under the 5800 West Freeway Alternative would have lower levels of congestion except on I-80, SR 201, and two segments of principal arterials. The greater level of congestion on I-80 and SR 201 under the 5800 West Freeway Alternative is a result of the traffic either entering or exiting the MVC from I-80 and SR 201.

Although key principal arterials in the transportation impact analysis area would have direct access to the MVC through interchanges, the overall congestion levels on the roadway segments analyzed would be reduced under the 5800 West Freeway Alternative compared to the No-Action Alternative. As shown in [Table 8.4-4](#), 27 road segments would operate at improved conditions in 2030 compared to 12 for the No-Action Alternative. The reduced congestion on these segments would be due to motorists using the MVC during the primary morning and evening commute periods instead of using the principal arterials.

Delay and Level of Service at Key Intersections

[Table 8.4-5](#) on page 8-26 shows how key intersections would operate under the 5800 West Freeway Alternative. In the table, shaded cells indicate intersections where conditions would be more congested under an action alternative than under the No-Action Alternative. The congestion for all but four of the intersections analyzed would improve under the 5800 West Freeway Alternative.

Table 8.4-4. 2030 Congestion Levels for Key Road Segments under the No-Action Alternative and Salt Lake County Action Alternatives

Segment	2030 V/C Ratio ^a (PM Peak Period)		
	No-Action Alternative	5800 West Freeway Alternative	7200 West Freeway Alternative
<i>Freeways</i>			
I-15, (SB) SR 201 to I-215	1.00	0.94	0.94
I-15, (NB) SR 201 to I-215	0.81	0.76	0.76
I-15, (SB) I-215 to Bangerter Highway	1.09	1.01	0.99
I-15, (NB) I-215 to Bangerter Highway	0.87	0.82	0.82
I-15, (SB) Bangerter Highway to Point of the Mountain	1.03	0.86	0.87
I-15, (NB) Bangerter Highway to Point of the Mountain	0.82	0.73	0.74
I-80, (WB) 7200 West to Bangerter Highway	0.72	0.97	0.95
I-80, (EB) 7200 West to Bangerter Highway	0.44	0.68	0.61
I-80, (WB) Bangerter Highway to I-215	0.62	0.75	0.71
I-80, (EB) Bangerter Highway to I-215	0.86	0.95	0.91
I-80, (WB) I-215 to I-15	0.67	0.73	0.71
I-80, (EB) I-215 to I-15	0.76	0.81	0.78
SR 201, (WB) SR 111 to Bangerter Highway	0.84	0.88	0.91
SR 201, (EB) SR 111 to Bangerter Highway	0.64	0.66	0.65
SR 201, (WB) Bangerter Highway to I-15	0.89	0.96	0.94
SR 201, (EB) Bangerter Highway to I-15	0.87	0.89	0.87
<i>North-South Principal Arterials</i>			
SR 111, SR 201 to 3500 South	1.13	0.86	0.85
SR 111, 3500 South to 6200 South	1.27	1.01	0.90
SR 111, 6200 South to New Bingham Highway	1.26	1.07	1.07
7200 West, I-80 to SR 201	0.70	0.68	NA
7200 West, SR 201 to 4100 South	1.08	0.82	0.71
5600 West, I-80 to SR 201	0.71	0.73	0.76
5600 West, SR 201 to 3500 South	1.10	0.82	0.96
5600 West, 3500 South to 6200 South	1.29	1.02	1.08
5600 West, 6200 South to 9000 South ^b	1.20	1.01	1.01
<i>East-West Principal Arterials</i>			
California Avenue, 7200 West to Bangerter Highway	0.62	0.72	0.69
2700 South, SR 111 to 5600 West	0.91	0.83	0.81
2700 South, 5600 West to Bangerter Highway	0.94	0.92	0.91
3500 South, 8400 West to 5600 West	0.80	0.78	0.78
3500 South, 5600 West to Bangerter Highway	0.97	0.94	0.91

Segment	2030 V/C Ratio ^a (PM Peak Period)		
	No-Action Alternative	5800 West Freeway Alternative	7200 West Freeway Alternative
4100 South, SR 111 to 5600 West	0.74	0.72	0.66
4100 South, 5600 West to Bangerter Highway	1.03	0.93	0.90
5400 South, SR 111 to Bangerter Highway	0.92	0.86	0.90
6200 South, SR 111 to Bangerter Highway	1.01	0.93	0.93
7800 South, SR 111 to Bangerter Highway	0.93	0.87	0.87
9000 South, SR 111 to Bangerter Highway	1.01	0.88	0.90
11400 South/11800 South, SR 111 to Bangerter Highway	1.05	0.94	0.94
12600 South, 5600 West to Bangerter Highway	1.26	1.03	1.04
13400 South, 5600 West to Bangerter Highway	1.17	0.91	0.91

NA = not applicable

^a V/C ratios: Less than 0.5 = minor to no congestion; 0.5 to 0.74 = moderate congestion; 0.75 to 0.99 = heavy congestion; 1.0 or higher = severe congestion, stop-and-go traffic.

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Table 8.4-5. 2030 Intersection Delay and Level of Service under the No-Action Alternative and Salt Lake County Action Alternatives

Intersection	2030 Intersection Conditions (PM Peak Period)					
	No-Action Alternative		5800 West Freeway Alternative		7200 West Freeway Alternative	
	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS
SR 111 & 3500 South	49.5	D	28.7	C	26.3	C
SR 111 & 5400 South	51.4	D	22.0	C	15.8	B
SR 111 & 6200 South	19.1	B	26.6	C	20.1	C
7200 West & 3500 South	86.6	F	40.4	D	39.4	D
5600 West & California Avenue	28.3	C	77.2	E	44.1	D
5600 West & SR 201 WB ramps	54.7	D	23.9	C	46.6	D
5600 West & SR 201 EB ramps	17.5	B	1.5	A	15.5	B
5600 West & 3500 South	92.3	F	93.1	F	98.2	F
5600 West & 4100 South	63.6	E	49.9	D	41.6	D
5600 West & 5400 South	122.2	F	88.2	F	103.4	F
5600 West & 6200 South	80.5	F	56.0	E	58.3	E
5600 West & 7800 South	37.3	D	46.5	D	43.6	D
5600 West & 9000 South	104.6	F	66.3	E	68.8	E
Bangerter Highway & SR 201 WB ramps	58.3	E	49.0	D	41.9	D
Bangerter Highway & SR 201 EB ramps	75.3	E	58.7	E	70.3	E
Bangerter Highway & 3500 South	163.0	F	122.3	F	84.3	F
Bangerter Highway & 5400 South	161.2	F	90.6	F	96.0	F
Bangerter Highway & 6200 South	114.5	F	43.7	D	50.1	D
Bangerter Highway & 9000 South	143.7	F	80.0	E	76.4	E
Bangerter Highway & 10400 South	121.9	F	50.0	D	53.2	D
Bangerter Highway & 12600 South	83.6	F	35.8	D	36.3	D
Bangerter Highway & 13400 South	67.7	E	18.5	B	18.8	B

^a Delay and LOS represent a weighted average of the northbound and southbound intersections.

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Combined Impacts of 5800 West Freeway and 5600 West Transit Alternatives

The 5800 West Freeway Alternative would be implemented with one of the two 5600 West Transit Alternative options. The combination of the freeway alternative with either of the transit options would result in the same travel demand impacts.

5800 West Freeway Alternative with Dedicated Right-of-Way Transit Option

Because the 5800 West Freeway Alternative was evaluated with the Dedicated Right-of-Way Transit Option, the impacts to delay and level of service from the 5800 West Freeway Alternative with Dedicated Right-of-Way Transit Option would be the same as those from the 5800 West Freeway Alternative above.

5800 West Freeway Alternative with Mixed-Traffic Transit Option

Because the 5800 West Freeway Alternative was evaluated with the Dedicated Right-of-Way Transit Option, and because the combination of the 5800 West Freeway Alternative with the Mixed-Traffic Transit Option would have the same travel demand impacts, the impacts to delay and level of service from the 5800 West Freeway Alternative with Mixed-Traffic Transit Option would be the same as those from the 5800 West Freeway Alternative above.

5800 West Freeway Alternative with Tolling Option

This option would consist of a freeway extending from I-80 to the Utah County line.

Congestion Levels on Key Road Segments

Table 8.4-6 on page 8-29 summarizes the projected V/C ratios for key road segments in Salt Lake County under the 5800 West Freeway Alternative with Tolling Option.

5800 West Freeway Alternative with Tolling Option Impacts	
Segments with greater congestion compared to the No-Action Alternative	18
Segments with less congestion compared to the No-Action Alternative	21
Intersections with greater delay compared to the No-Action Alternative	7
Intersections with less delay compared to the No-Action Alternative	15

In Table 8.4-6, the shaded cells indicate road segments where the congestion levels under each alternative would be greater than those under the No-Action Alternative. Compared to the No-Action Alternative, slightly more principal arterial segments would have lower levels of congestion under the 5800 West Freeway Alternative with Tolling Option than under the No-Action Alternative.



As shown in [Table 8.4-6](#), 20 road segments would operate at improved conditions and 18 would operate at a more congested conditions in 2030 compared to the No-Action Alternative.

Delay and Level of Service at Key Intersections

[Table 8.4-7](#) on page 8-31 shows how key intersections would operate under the 5800 West Freeway Alternative with Tolling Option. In the table, shaded cells indicate intersections where conditions would be more congested under each alternative than under the No-Action Alternative. Compared to the No-Action Alternative, all but seven of the intersections analyzed would experience improved performance under the 5800 West Freeway Alternative with Tolling Option.



Table 8.4-6. 2030 Congestion Levels for Key Road Segments under the No-Action Alternative and Salt Lake County Action Alternatives with Tolling Option

Segment	2030 V/C Ratio ^a (PM Peak Period)		
	No-Action Alternative	5800 West Freeway Alternative	7200 West Freeway Alternative
<i>Freeways</i>			
I-15, (SB) SR 201 to I-215	1.00	0.98	0.95
I-15, (NB) SR 201 to I-215	0.81	0.80	0.80
I-15, (SB) I-215 to Bangerter Highway	1.09	1.04	1.02
I-15, (NB) I-215 to Bangerter Highway	0.87	0.86	0.86
I-15, (SB) Bangerter Highway to Point of the Mountain	1.03	0.93	0.93
I-15, (NB) Bangerter Highway to Point of the Mountain	0.82	0.80	0.80
I-80, (WB) 7200 West to Bangerter Highway	0.72	0.95	0.92
I-80, (EB) 7200 West to Bangerter Highway	0.44	0.57	0.44
I-80, (WB) Bangerter Highway to I-215	0.62	0.77	0.73
I-80, (EB) Bangerter Highway to I-215	0.86	0.93	0.88
I-80, (WB) I-215 to I-15	0.67	0.74	0.73
I-80, (EB) I-215 to I-15	0.76	0.79	0.76
SR 201, (WB) SR 111 to Bangerter Highway	0.84	0.88	0.91
SR 201, (EB) SR 111 to Bangerter Highway	0.64	0.65	0.63
SR 201, (WB) Bangerter Highway to I-15	0.89	0.96	0.93
SR 201, (EB) Bangerter Highway to I-15	0.87	0.89	0.87
<i>North-South Principal Arterials</i>			
SR 111, SR 201 to 3500 South	1.13	1.01	1.09
SR 111, 3500 South to 6200 South	1.27	1.16	1.14
SR 111, 6200 South to New Bingham Highway	1.26	1.20	1.20
7200 West, I-80 to SR 201	0.70	0.78	NA
7200 West, SR 201 to 4100 South	1.08	0.95	0.63
5600 West, I-80 to SR 201	0.71	0.77	0.89
5600 West, SR 201 to 3500 South	1.10	1.02	1.10
5600 West, 3500 South to 6200 South	1.29	1.18	1.22
5600 West, 6200 South to 9000 South ^b	1.20	1.17	1.18
<i>East-West Principal Arterials</i>			
California Avenue, 7200 West to Bangerter Highway	0.62	0.74	0.79
2700 South, SR 111 to 5600 West	0.91	0.90	0.93
2700 South, 5600 West to Bangerter Highway	0.94	0.94	0.94
3500 South, 8400 West to 5600 West	0.80	0.84	0.77
3500 South, 5600 West to Bangerter Highway	0.97	0.98	1.00

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Segment	2030 V/C Ratio ^a (PM Peak Period)		
	No-Action Alternative	5800 West Freeway Alternative	7200 West Freeway Alternative
4100 South, SR 111 to 5600 West	0.74	0.79	0.75
4100 South, 5600 West to Bangerter Highway	1.03	1.01	1.01
5400 South, SR 111 to Bangerter Highway	0.92	0.94	0.95
6200 South, SR 111 to Bangerter Highway	1.01	1.00	1.01
7800 South, SR 111 to Bangerter Highway	0.93	0.96	0.96
9000 South, SR 111 to Bangerter Highway	1.01	1.01	1.03
11400 South/11800 South, SR 111 to Bangerter Highway	1.05	1.05	1.06
12600 South, 5600 West to Bangerter Highway	1.26	1.22	1.21
13400 South, 5600 West to Bangerter Highway	1.17	1.10	1.12

NA = not applicable

^a V/C ratios: Less than 0.5 = minor to no congestion; 0.5 to 0.74 = moderate congestion; 0.75 to 0.99 = heavy congestion; 1.0 or higher = severe congestion, stop-and-go traffic.

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Table 8.4-7. 2030 Intersection Delay and Level of Service under the No-Action Alternative and Salt Lake County Action Alternatives with Tolling Option

Intersection	2030 Intersection Conditions (PM Peak Period)					
	No-Action Alternative		5800 West Freeway Alternative		7200 West Freeway Alternative	
	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS
SR 111 & 3500 South	49.5	D	46.1	D	45.3	D
SR 111 & 5400 South	51.4	D	43.2	D	29.9	C
SR 111 & 6200 South	19.1	B	20.5	C	19.5	B
7200 West & 3500 South	86.6	F	55.2	E	25.5	C
5600 West & California Avenue	28.3	C	47.4	D	63.0	E
5600 West & SR 201 WB ramps	54.7	D	23.0	C	64.9	E
5600 West & SR 201 EB ramps	17.5	B	2.8	A	31.0	C
5600 West & 3500 South	92.3	F	121.4	F	123.0	F
5600 West & 4100 South	63.6	E	62.3	E	63.3	E
5600 West & 5400 South	122.2	F	129.1	F	130.7	F
5600 West & 6200 South	80.5	F	82.8	F	82.2	F
5600 West & 7800 South	37.3	D	59.7	E	55.8	E
5600 West & 9000 South	104.6	F	92.6	F	97.5	F
Bangerter Highway & SR 201 WB ramps	58.3	E	59.3	E	49.1	D
Bangerter Highway & SR 201 EB ramps	75.3	E	66.8	E	78.7	E
Bangerter Highway & 3500 South	163.0	F	142.9	F	102.9	F
Bangerter Highway & 5400 South	161.2	F	134.8	F	128.8	F
Bangerter Highway & 6200 South	114.5	F	78.5	E	82.8	F
Bangerter Highway & 9000 South	143.7	F	122.0	F	123.5	F
Bangerter Highway & 10400 South	121.9	F	90.7	F	91.5	F
Bangerter Highway & 12600 South	83.6	F	65.2	E	61.4	E
Bangerter Highway & 13400 South	67.7	E	47.0	D	47.1	D

^a Delay and LOS represent a weighted average of the northbound and southbound intersections.



8.4.3.3 7200 West Freeway Alternative

As described in Chapter 2, Alternatives, this alternative would consist of a freeway extending from I-80 to the Utah County line. The 7200 West Freeway Alternative that was analyzed included the Dedicated Right-of-Way Option from the 5600 West Transit Alternative. The combination of the 7200 West Freeway Alternative with either of the transit options would result in the same travel demand impacts, so the results of the analysis would have been the same if the Mixed-Traffic Option had been used.

7200 West Freeway Alternative Impacts	
Segments with greater congestion compared to the No-Action Alternative	11
Segments with less congestion compared to the No-Action Alternative	27
Intersections with greater delay compared to the No-Action Alternative	4
Intersections with less delay compared to the No-Action Alternative	18

Congestion Levels on Key Road Segments

Table 8.4-4 above on page 8-24 summarizes the projected V/C ratios for key road segments in Salt Lake County under the 7200 West Freeway Alternative. Compared to the No-Action Alternative, most of the principal arterial segments under the 7200 West Freeway Alternative would have lower levels of congestion. The reduced congestion would be due to motorists using the MVC during the primary morning and evening commute periods instead of using the principal arterials.

On I-80 and SR 201, congestion would be mostly heavy under the 7200 West Freeway Alternative. The greater level of congestion under the 7200 West Freeway Alternative is a result of the traffic either entering or exiting the MVC from I-80 and SR 201. This weaving between freeways increases congestion as traffic merges from one facility to the other. On 5600 West from I-80 to SR 201 and California Avenue from 7200 West to Bangerter Highway, congestion would worsen under the 7200 West Freeway Alternative.

Overall congestion levels on the roadway segments analyzed would decrease under the 7200 West Freeway Alternative compared to the No-Action Alternative. About 27 road segments would operate at improved conditions and 11 would operate at more congested conditions in 2030 compared to the No-Action Alternative.

Delay and Level of Service at Key Intersections

Table 8.4-5 above on page 8-26 shows how key intersections would operate under the 7200 West Freeway Alternative. In most cases, the intersections would operate with less delay and an improved level of service compared to the No-



Action Alternative. At the 5600 West/California Avenue and the 7200 West and 3500 South intersections, the delay would increase and the level of service would worsen.

Combined Impacts of 7200 West Freeway and 5600 West Transit Alternatives

As with the 5800 West Freeway Alternative, the 7200 West Freeway Alternative would be implemented with one of the two 5600 West Transit Alternative options. The combination of the freeway alternative with either of the transit options would result in the same travel demand impacts.

7200 West Freeway Alternative with Dedicated Right-of-Way Transit Option

Because the 7200 West Freeway Alternative was evaluated with the Dedicated Right-of-Way Transit Option, the impacts to delay and level of service from the 7200 West Freeway Alternative with Dedicated Right-of-Way Transit Option would be the same as those from the 7200 West Freeway Alternative above.

7200 West Freeway Alternative with Mixed-Traffic Transit Option

Because the 7200 West Freeway Alternative was evaluated with the Dedicated Right-of-Way Transit Option, and because the combination of the 7200 West Freeway Alternative with the Mixed-Traffic Transit Option would have the same travel demand impacts, the impacts to delay and level of service from the 7200 West Freeway Alternative with Mixed-Traffic Transit Option would be the same as those from the 7200 West Freeway Alternative above.



7200 West Freeway Alternative with Tolling Option

This option would consist of a freeway extending from I-80 to the Utah County line.

Congestion Levels on Key Road Segments

Table 8.4-6 above on page 8-29 summarizes the projected V/C ratios for key road segments in Salt Lake County

under the 7200 West Freeway Alternative with Tolling Option. Compared to the No-Action Alternative, 23 more key road segments would have lower levels of congestion under the 7200 West Freeway Alternative with Tolling Option than under the No-Action Alternative. The higher congestion would be due to motorists using the principal arterials during the primary morning and evening commute periods instead of using the MVC.

Overall, congestion levels would decrease on the roadway segments analyzed under the 7200 West Freeway Alternative with Tolling Option compared to the No-Action Alternative. As shown in Table 8.4-6 above, 23 road segments would operate at the same or improved conditions and 15 would operate at a more congested conditions in 2030 compared to the No-Action Alternative.

Delay and Level of Service at Key Intersections

Table 8.4-7 above on page 8-31 shows how key intersections would operate under the 7200 West Freeway Alternative with Tolling Option. Compared to the No-Action Alternative, all but nine of the intersections analyzed would experience improved performance under the 7200 West Freeway Alternative with Tolling Option. Of these nine, four intersections would experience a drop in level of service.

7200 West Freeway Alternative with Tolling Option Impacts	
Segments with greater congestion compared to the No-Action Alternative	15
Segments with less congestion compared to the No-Action Alternative	23
Intersections with greater delay compared to the No-Action Alternative	9
Intersections with less delay compared to the No-Action Alternative	13



8.4.4 Utah County Alternatives

In Utah County, three alternatives are under consideration: the Southern Freeway Alternative, the 2100 North Freeway Alternative, and the Arterials Alternative. In addition, a tolling option was evaluated for each Utah County alternative. Impacts under each combination of alternatives and options are discussed in the following sections.

8.4.4.1 Southern Freeway Alternative

As described in Chapter 2, Alternatives, this alternative would consist of a freeway extending from the Utah County line to I-15 at Lindon.

Congestion Levels on Key Road Segments

Southern Freeway Alternative Impacts	
Segments with greater congestion compared to the No-Action Alternative	1
Segments with less congestion compared to the No-Action Alternative	10
Intersections with greater delay compared to the No-Action Alternative	0
Intersections with less delay compared to the No-Action Alternative	5

Table 8.4-8 below summarizes the V/C

ratios for key road segments in Utah County under the Southern Freeway Alternative. In Table 8.4-8, the shaded cells indicate road segments where the congestion levels under an action alternative would be greater than those under the No-Action Alternative.

The overall congestion levels on the roadway segments analyzed would be reduced under the Southern Freeway Alternative compared to the No-Action Alternative. The reduced congestion would be due to motorists using the MVC during the primary morning and evening commute periods instead of using the principal arterials. However, the segment of 2300 West from SR 73 to 1900 South would be more congested under the Southern Freeway Alternative than under the No-Action Alternative.

Delay and Level of Service at Key Intersections

Table 8.4-9 on page 8-37 shows how key intersections would operate under the Southern Freeway Alternative. In the table, shaded cells indicate intersections where conditions would be more congested under an action alternative than under the No-Action Alternative. Under this alternative, all study intersections would operate with less delay under the Southern Freeway Alternative than under the No-Action Alternative.

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Table 8.4-8. 2030 Congestion Levels for Key Road Segments under the No-Action Alternative and Utah County Action Alternatives

Segment	2030 V/C Ratio ^a (PM Peak Period)			
	No-Action Alternative	Southern Freeway Alternative	2100 North Freeway Alternative	Arterials Alternative
<i>Freeways</i>				
I-15, (SB) County Line to Lehi 1200 W.	0.92	0.77	0.81	0.80
I-15, (NB) County Line to Lehi 1200 W.	0.82	0.70	0.73	0.75
I-15, (SB) Lehi 1200 W. to Pleasant Grove	0.74	0.61	0.75	0.74
I-15, (NB) Lehi 1200 W. to Pleasant Grove	0.73	0.56	0.75	0.72
I-15, (SB) Pleasant Grove to University Parkway	0.75	0.74	0.75	0.74
I-15, (NB) Pleasant Grove to University Parkway	0.73	0.73	0.74	0.73
<i>North-South Principal Arterials</i>				
Redwood Road, Bangerter Highway to SR 73	1.11	0.80	0.70	0.70
2300 West (Lehi), 2100 North to SR 73	1.20	0.86	0.78	0.69
2300 West (Lehi), SR 73 to 1900 South	0.52	0.60	0.40	0.47
<i>East-West Principal Arterials</i>				
Porter Rockwell, MVC to I-15	NA	NA	NA	0.64
2100 North, MVC to I-15	NA	NA	NA	0.79
Lehi Main Street (SR 73), MVC to I-15	1.08	0.85	0.95	0.88
1000 South, SR 73 to I-15	1.14	0.64	0.96	0.82
1900 South, Redwood Road to I-15	NA	NA	NA	0.49
NA = not applicable				
^a V/C ratios: Less than 0.5 = minor to no congestion; 0.5 to 0.74 = moderate congestion; 0.75 to 0.99 = heavy congestion; 1.0 or higher = severe congestion, stop-and-go traffic.				

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Table 8.4-9. 2030 Intersection Delay and Level of Service under the No-Action Alternative and Utah County Action Alternatives

Intersection	2030 Intersection Conditions (PM Peak Period)							
	No-Action Alternative		Southern Freeway Alternative		2100 North Freeway Alternative		Arterials Alternative	
	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS
Redwood Road & SR 73	94.7	F	24.3	C	29.8	C	29.6	C
2300 West (Lehi) & SR 73	100.7	F	35.8	D	38.8	D	37.6	D
Center St. (Lehi) & SR 73	28.3	C	16.7	B	18.4	B	17.9	B
Pleasant Grove & I-15 SB ramps	36.5	D	34.4	C	38.3	D	29.5	C
Pleasant Grove & I-15 NB ramps	6.9	A	6.4	A	6.1	A	11.3	B

Southern Freeway Alternative with Tolling Option

Congestion Levels on Key Road Segments

Table 8.4-10 below summarizes the V/C ratios for key road segments in Utah County under the Southern Freeway Alternative with Tolling Option. In Table 8.4-10, the shaded cells indicate road segments where the congestion levels under an action alternative would be greater than those under the No-Action Alternative.

The reduced congestion levels on the roadway segments analyzed under this alternative would be due to motorists using the MVC during the primary morning and evening commute periods instead of using the principal arterials. However, the segment of I-15 from the Pleasant Grove interchange to University Parkway and 2300 West from SR 73 to 1900 South would be more congested under the Southern Freeway Alternative with Tolling Option than under the No-Action Alternative.

Southern Freeway Alternative with Tolling Option Impacts	
Segments with greater congestion compared to the No-Action Alternative	2
Segments with less congestion compared to the No-Action Alternative	9
Intersections with greater delay compared to the No-Action Alternative	1
Intersections with less delay compared to the No-Action Alternative	4

Table 8.4-10. 2030 Congestion Levels for Key Road Segments under the No-Action Alternative and Utah County Action Alternatives with Tolling Option

Segment	2030 V/C Ratio ^a (PM Peak Period)			
	No-Action Alternative	Southern Freeway Alternative	2100 North Freeway Alternative	Arterials Alternative
<i>Freeways</i>				
I-15, (SB) County Line to Lehi 1200 W.	0.92	0.85	0.86	0.84
I-15, (NB) County Line to Lehi 1200 W.	0.82	0.81	0.79	0.80
I-15, (SB) Lehi 1200 W. to Pleasant Grove	0.74	0.70	0.73	0.73
I-15, (NB) Lehi 1200 W. to Pleasant Grove	0.73	0.70	0.74	0.72
I-15, (SB) Pleasant Grove to University Parkway	0.75	0.74	0.74	0.74
I-15, (NB) Pleasant Grove to University Parkway	0.73	0.74	0.73	0.73
<i>North-South Principal Arterials</i>				
Redwood Road, Bangerter Highway to SR 73	1.11	1.05	1.00	0.98
2300 West (Lehi), 2100 North to SR 73	1.20	1.08	0.94	0.93
2300 West (Lehi), SR 73 to 1900 South	0.52	0.54	0.43	0.56
<i>East-West Principal Arterials</i>				
Porter Rockwell, MVC to I-15	NA	NA	NA	0.61
2100 North, MVC to I-15	NA	NA	NA	0.68
Lehi Main Street (SR 73), MVC to I-15	1.08	1.00	0.97	0.87
1000 South, SR 73 to I-15	1.14	1.05	1.03	0.83
1900 South, Redwood Road to I-15	NA	NA	NA	0.64
NA = not applicable				
^a V/C ratios: Less than 0.5 = minor to no congestion; 0.5 to 0.74 = moderate congestion; 0.75 to 0.99 = heavy congestion; 1.0 or higher = severe congestion, stop-and-go traffic.				

Delay and Level of Service at Key Intersections

Table 8.4-11 below shows how key intersections would operate under the Southern Freeway Alternative with Tolling Option. In the table, shaded cells indicate intersections where conditions would be more congested under an action alternative than under the No-Action Alternative. Under this option, one of the five intersections would operate with less delay than under the No-Action Alternative.

At the intersection of the southbound I-15 ramp and Pleasant Grove Boulevard, the increase in delay would not cause the level of service to change from LOS D.

Table 8.4-11. 2030 Intersection Delay and Level of Service under the No-Action Alternative and Utah County Action Alternatives with Tolling Option

Intersection	2030 Intersection Conditions (PM Peak Period)							
	No-Action Alternative		Southern Freeway Alternative		2100 North Freeway Alternative		Arterials Alternative	
	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS	Delay (seconds)	LOS
Redwood Road & SR 73	94.7	F	62.8	E	58.9	E	78.2	E
2300 West (Lehi) & SR 73	100.7	F	86.5	F	77.3	E	51.7	D
Center St. (Lehi) & SR 73	28.3	C	20.9	C	20.7	C	29.3	C
Pleasant Grove & I-15 SB ramps	36.5	D	37.4	D	37.9	D	29.9	C
Pleasant Grove & I-15 NB ramps	6.9	A	6.4	A	6.2	A	12.5	B

8.4.4.2 2100 North Freeway Alternative

As described in Chapter 2, Alternatives, this alternative would consist of a freeway extending from the Utah County line to SR 73 in Saratoga Springs and a lateral freeway extending east along 2100 North to I-15 in Lehi.

2100 North Freeway Alternative Impacts	
Segments with greater congestion compared to the No-Action Alternative	3
Segments with less congestion compared to the No-Action Alternative	8
Intersections with greater delay compared to the No-Action Alternative	1
Intersections with less delay compared to the No-Action Alternative	4

Congestion Levels on Key Road Segments

Table 8.4-8 above on page 8-36 summarizes the V/C ratios for key road segments in Utah County under the 2100 North Freeway Alternative. Eight road segments would have less congestion than under the No-Action Alternative. Note that, although I-15 would operate at a more congested level under this alternative compared to the No-Action Alternative, the congestion level would remain within an acceptable range (LOS C).



Delay and Level of Service at Key Intersections

Table 8.4-9 above on page 8-37 shows how key intersections would operate under the 2100 North Freeway Alternative. Under this alternative, four of the five study intersections would operate with less delay than under the No-Action Alternative.

At the intersections of the southbound I-15 ramp and Pleasant Grove Boulevard, the increase in delay would not cause the level of service to change from LOS D.

2100 North Freeway Alternative with Tolling Option

Congestion Levels on Key Road Segments

Table 8.4-10 above on page 8-38 summarizes the V/C ratios for key road segments in Utah County under the 2100 North Freeway Alternative with Tolling Option. Ten segments would operate at improved conditions compared to the No-Action Alternative.

2100 North Freeway Alternative with Tolling Option Impacts	
Segments with greater congestion compared to the No-Action Alternative	1
Segments with less congestion compared to the No-Action Alternative	10
Intersections with greater delay compared to the No-Action Alternative	1
Intersections with less delay compared to the No-Action Alternative	4

Delay and Level of Service at Key Intersections

Table 8.4-11 above on page 8-39 shows how key intersections would operate under the 2100 North Freeway Alternative with Tolling Option. Under this option, four of the five study intersections would operate with less delay than under the No-Action Alternative.



8.4.4.3 Arterials Alternative

As described in Chapter 2, Alternatives, this alternative would consist of a series of arterial roadways throughout northern Utah County. The combination of arterials includes a freeway segment from the Utah County line to SR 73 and arterial roadways at Porter Rockwell Boulevard, 2100 North, and 1900 South.

Arterials Alternative Impacts	
Segments with greater congestion compared to the No-Action Alternative	0
Segments with less congestion compared to the No-Action Alternative	11
Intersections with greater delay compared to the No-Action Alternative	1
Intersections with less delay compared to the No-Action Alternative	4

The expected transportation impacts for each option are discussed below.

Congestion Levels on Key Road Segments

Table 8.4-8 above on page 8-36 summarizes the V/C ratios for the key road segments in Utah County under the Arterials Alternative. The overall congestion levels on the roadway segments analyzed would be reduced on all roadway segments under the Arterials Alternative compared to the No-Action Alternative.

Delay and Level of Service at Key Intersections

Table 8.4-9 above on page 8-37 shows how key intersections would operate under the Arterials Alternative. Under this alternative, four of the five study intersections would operate with less delay than under the No-Action Alternative.

At the intersection of the northbound I-15 ramp and Pleasant Grove Boulevard, the increase in delay would cause the level of service to drop from LOS A to LOS B.

Arterials Alternative with Tolling Option

Congestion Levels on Key Road Segments

Table 8.4-10 above on page 8-38 summarizes the V/C ratios for the key road segments in Utah County under the Arterials Alternative with Tolling Option. As shown in this table, one segment would have worse congestion

Arterials Alternative with Tolling Option Impacts	
Segments with greater congestion compared to the No-Action Alternative	1
Segments with less congestion compared to the No-Action Alternative	10
Intersections with greater delay compared to the No-Action Alternative	2
Intersections with less delay compared to the No-Action Alternative	3

under the Arterials Alternative with Tolling Option than under the No-Action Alternative. Note that, under the Arterials Alternative with Tolling Option, only the freeway portion would be tolled. The arterials would not be tolled.

Delay and Level of Service at Key Intersections

Table 8.4-11 above on page 8-39 shows how key intersections would operate under the Arterials Alternative with Tolling Option. Under this option, two of the five study intersections would operate with less delay than under the No-Action Alternative.

At the intersection of the northbound I-15 ramp and Pleasant Grove Boulevard, the increase in delay would cause the level of service to drop from LOS A to LOS B.

8.4.5 Mitigation Measures

Although the MVC project might increase congestion on adjacent roads as a result of traffic entering or exiting the MVC, no mitigation measures are proposed.

8.4.6 Cumulative Impacts

Cumulative impacts were analyzed for local and regionally important issues (farmlands, air quality, water quality, and ecosystems) as developed with resource agencies and the public during scoping. See Chapter 25, Cumulative Impacts, for a more detailed discussion of cumulative impacts.

8.4.7 Summary of Impacts

In order to determine the transportation impacts for Salt Lake and Utah Counties, the individual alternatives for each county had to be combined with an alternative from the other county. All of the Salt Lake County alternatives were modeled with the 2100 North Freeway Alternative in Utah County. All of the Utah County alternatives were modeled with the 5800 West Freeway Alternative in Salt Lake County. These alternative combinations produced the greatest traffic volumes for each alternative and so provided the greatest level of impact for the combined Salt Lake County and Utah County alternatives. Although not every potential scenario was modeled, the impacts provided for each individual alternative above adequately represent the combined impacts.

Table 8.4-12 below shows the impacts associated with each action alternative in terms of congestion levels on key road segments and delay at key intersections.

Table 8.4-12. Summary of Impacts to Transportation

Alternative	Segments with Congestion		Intersection Delays	
	Segments with More Congestion than No-Action	Segments with Less Congestion than No-Action	Intersections with More Congestion than No-Action	Intersections with Less Congestion than No-Action
<i>5800 West Freeway / 5600 West Transit / Southern Freeway</i>				
Without tolling	13	37	4	23
With tolling	20	30	8	19
<i>5800 West Freeway / 5600 West Transit / 2100 North Freeway</i>				
Without tolling	15	35	5	22
With tolling	19	31	8	19
<i>5800 West Freeway / 5600 West Transit / Arterials</i>				
Without tolling	12	38	5	22
With tolling	19	31	9	18
<i>7200 West Freeway / 5600 West Transit / Southern Freeway</i>				
Without tolling	12	37	4	23
With tolling	17	32	10	17
<i>7200 West Freeway / 5600 West Transit / 2100 North Freeway</i>				
Without tolling	14	35	5	22
With tolling	16	33	10	17
<i>7200 West Freeway / 5600 West Transit / Arterials</i>				
Without tolling	11	38	5	22
With tolling	16	33	11	16

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8.5 References

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